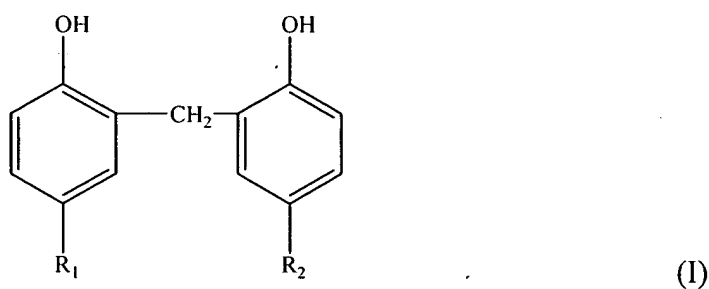


In the claims

Please amend the claims as follows:

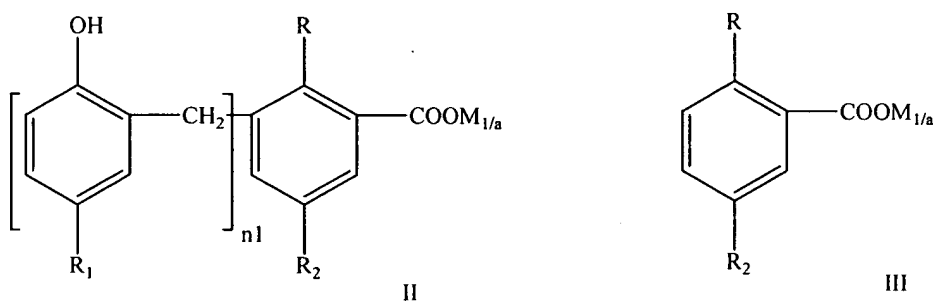
1. (currently amended) A color-developing agent resin composition, ~~which contains~~
comprising:

Component 1: a phenolic resin ~~having a~~ comprising formula I ~~shown as follows:~~



and

Component 2: a blend of graft copolymers of a phenolic resin and a multivalent metal salt polymer of a substituted aryl carboxylic acid, wherein at least a portion of said graft copolymers ~~are represented by~~ comprise formulas II and III as follows:



wherein[[,]]

R is C₁-C₄ linear alkyl, hydroxy or halogen;

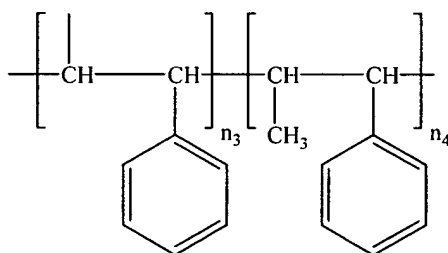
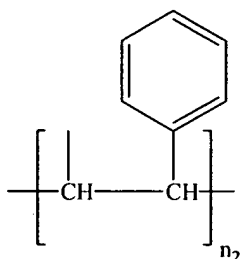
R₁ is individually C₁-C₁₂ linear or branched alkyl, C₁-C₁₂ haloalkyl, C₆-C₁₂ aryl, C₇-C₁₂ aralkyl;

$$n_1 = 1-2$$

M is a multivalent metal ion;

a represents the valence of M; and

R₂ ~~has a structure as follows:~~ is



wherein n_2 is an integer ~~of~~ from 1-100, preferably 1-10; n_3 ~~of~~ is an integer of from 1-100; and n_4 is an integer from 1-100.

2. (currently amended) The color-developing agent resin composition of claim 1, ~~characterized in that~~ wherein the content of the component 1 ~~is~~ comprises about 5-50 % by weight, and the content of the component 2 ~~is~~ comprises about 95-50 % by weight of the color-developing agent resin composition.

3. (currently amended) The color-developing agent resin composition of claim 1 or 2, ~~characterized in that~~ wherein the content of the component 1 ~~is~~ comprises about 10-30 % by weight, and the content of the component 2 ~~is~~ comprises about 90-70 % by weight of the color-developing agent resin composition.

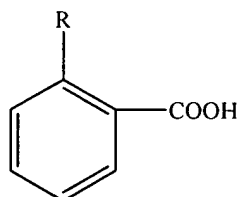
4. (currently amended) A color-developing agent resin emulsion, ~~which contains~~ comprising:

- (1) the color-developing agent resin composition of claim 1 [[or 2]]; and
- (2) an emulsifying agent.

5. (currently amended) The color-developing agent resin emulsion of claim 4, ~~characterized in that~~ wherein the emulsifying agent is selected from the group consisting of a surfactant, a modified starch [[or]] and a polyvinyl alcohol.

6. (currently amended) A method for preparing the color-developing agent resin composition of claim 1 [[or 2,]] comprising ~~the steps as follows~~:

(1) synthesizing the polymer of a substituted aryl carboxylic acid and an alkenyl benzene in the presence of a catalyst in an inert solvent by using [[the]] a substituted aryl carboxylic acid or ester having a general formula (IV) ~~as follows~~ and an alkenyl benzene as feedstocks, and reacting the polymer with a multivalent metal ion to form a multivalent metal salt polymer of substituted aryl carboxylic acid as an intermediate;



(IV)

~~wherein, the definition of R is the same as that in claim 1;~~

R is C₁–C₄ linear alkyl, hydroxy or halogen;

(2) melting the mixture of a *p*-substituted phenol, the substituted aryl carboxylic acid or ester having a general formula (IV), a metal oxide and a catalyst, and reacting them to form a reaction product;

(3) adding the intermediate of step 1 to the reaction product of step 2, and reacting at about 80–150 °C for about 30–150 minutes to form a second reaction product;

(4) reacting the second reaction product of step 3 with an aldehyde under refluxing at about 80–130 °C for about 1–10 hours;

(5) dehydrating the ~~reaction~~ product of step 4 at a temperature of about 90–150 °C under a vacuum[[of]] at about 0.02–0.06[[Mpa]] mPa to form a dehydrated product; and

(6) cooling the dehydrated product and milling the dehydrated product to ~~reach~~ produce a required particle-size range.

7. (currently amended) The method of claim 6, ~~characterized in that~~, wherein:

(a) the molar ratio of the substituted aryl carboxylic acid to the *p*-substituted phenol in step 2 is about 0.05–1.55:1 and the molar ratio of the metal oxide to the substituted aryl carboxylic acid is about 0.02–1.30:1;

(b) the molar ratio of the metal salt of substituted aryl carboxylate to the *p*-substituted phenol in step 3 is about 0.05–5.0:1; and

(c) the molar ratio of the aldehyde to the *p*-substituted phenol in step 4 is about 0.06–2.0:1.

8. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the inert ~~organic solvent used~~ is selected from ~~solvents containing no benzene, such as~~ the group consisting of organochlorines, alcohols, ethers, and ketones.

9. (currently amended) The method of claim 8, ~~characterized in that~~ wherein the inert ~~organic~~ solvent used is selected from the group consisting of chloroethane, dichloroethane, trichloromethane, methanol, ethanol, propanol, butanol, isopropanol, isobutanol, dipropyl ether, diisopropyl ether, dibutyl ether, diisoamyl ether, acetone, butanone, pentanone, hexanone, hexanedione, heptanone and cyclohexanone.

10. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the *p*-substituted phenol[[used]] is selected from the group consisting of alkylphenol, arylphenol[[,]] and aralkylphenol, or[[the]] a mixture thereof.

11. (currently amended) The method of claim 10, ~~characterized in that~~ wherein the *p*-substituted phenol used is selected from the group consisting of *p*-methylphenol, *p*-ethylphenol, *p*-propylphenol, *p*-butylphenol, *p*-tert-butylphenol, *p*-amylphenol, *p*-hexylphenol, *p*-heptylphenol, *p*-octylphenol, *p*-tert-octylphenol, *p*-nonylphenol, *p*-decylphenol, *p*-undecylphenol, *p*-dodecylphenol, *p*-chlorophenol, *p*-bromophenol, *p*-phenylphenol and *p*-phenylalkyl phenol, or a mixture thereof.

12. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the aldehyde[[used]] is selected from the group consisting of formaldehyde, acetaldehyde, propionaldehyde, butyraldehyde, amylaldehyde and benzaldehyde.

13. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the aldehyde[[used]] is[[a]] formalin[[of]] comprising about 37 % by weight[[or]] to about 50 % by weight.

14. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the substituted aryl carboxylic acid[[used]] is selected from the group consisting of C₁-C₄ linear alkylphenyl carboxylic acid, halophenyl carboxylic acid[[,]] and salicylic acid[[and]], or an ester esters thereof.

15. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the metal oxide[[used]] is an oxide of metal selected from the group consisting of Mg, Ca, Cu, Cd, Al, Zn, Cr, In, Sn, Co, Ni, Ti and Ba.

16. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the metal salt of substituted aryl carboxylic acid[[used]] is zinc salt.

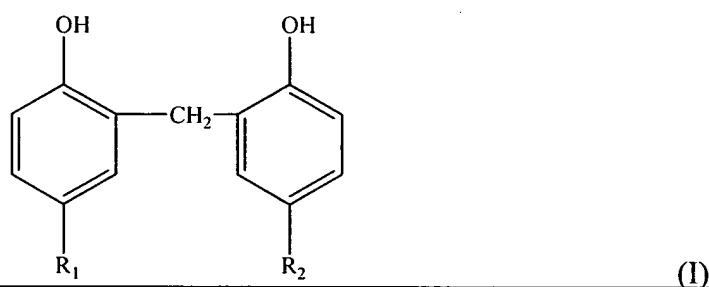
17. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the catalyst[[used]] is an acidic or a basic catalyst, or a specified surfactant.

18. (currently amended) The method of claim 6, ~~characterized in that~~ wherein the alkenyl benzene[[used]] is selected from the group consisting of vinyl benzene, propenyl benzene, butenyl benzene, butadienyl benzene, isobutenyl benzene and cyclo-alkenyl benzene and the like.

19. (currently amended) A method for preparing ~~the color-developing agent resin emulsion of claim 4~~ a color-developing agent resin emulsion comprising:

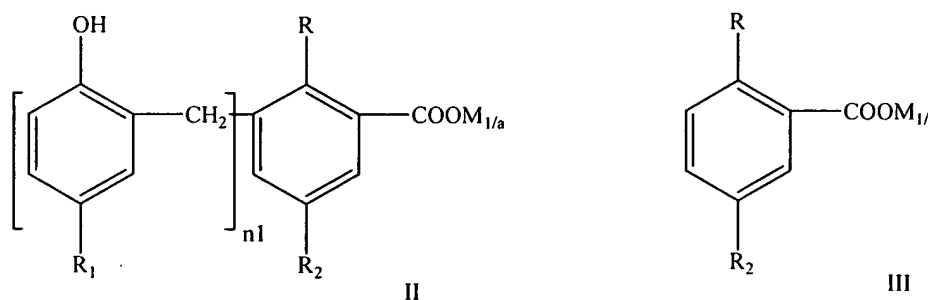
(1) a color-developing agent resin composition comprising:

Component 1: a phenolic resin comprising formula I:



and

Component 2: a blend of graft copolymers of a phenolic resin and a multivalent metal salt polymer of a substituted aryl carboxylic acid, wherein at least a portion of said graft copolymers comprise formulas II and III



wherein

R is C₁-C₄ linear alkyl, hydroxy or halogen;

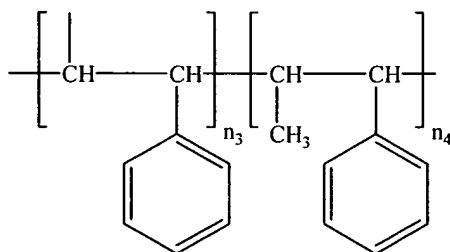
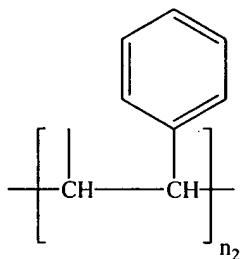
R₁ is individually C₁-C₁₂ linear or branched alkyl, C₁-C₁₂ halohydrocarbyl, C₆-C₁₂ aryl, C₇-C₁₂ aralkyl;

n₁ = 1-2

M is a multivalent metal ion;

a represents the valence of M; and

R₂ is



wherein n₂ is an integer from 1-100; n₃ is an integer of 1-100; and n₄ is an integer of 1-100; and

(2) an emulsifying agent,

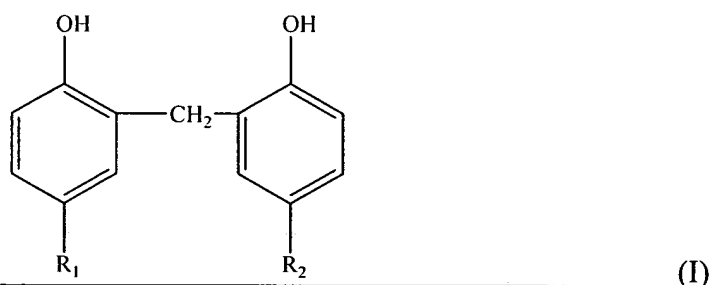
comprising steps as follows:

emulsifying wherein the color-developing agent resin composition of claim 1 or 2 is
emulsified with[[an]] the emulsifying agent in an emulsifying machine to obtain an oil-in-water
emulsion with[[the]] an average particle size of less than about 1.5μm.

20. (currently amended) The method of claim 19, ~~characterized in that~~ wherein the
emulsifying agent comprises a surfactant, a modified starch or a polyvinyl alcohol.

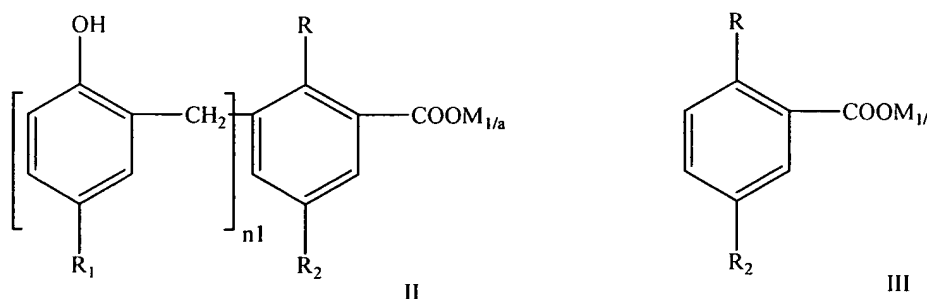
21. (currently amended) ~~A use of the color-developing agent resin composition of claim 1 as a resin color-developing agent for no-carbon copying paper, wherein said resin color-developing agent comprises a color-developing agent resin composition comprising:~~

Component 1: a phenolic resin comprising formula I



and

Component 2: a blend of graft copolymers of a phenolic resin and a multivalent metal salt polymer of a substituted aryl carboxylic acid, wherein at least a portion of said graft copolymers comprise formulas II and III



wherein

R is C₁-C₄ linear alkyl, hydroxy or halogen;

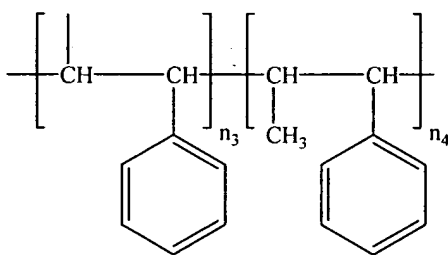
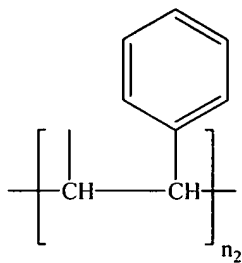
R₁ is individually C₁-C₁₂ linear or branched alkyl, C₁-C₁₂ haloalkyl, C₆-C₁₂ aryl, C₇-C₁₂ aralkyl;

n₁ = 1-2

M is a multivalent metal ion;

a represents the valence of M; and

R₂ is



wherein n_2 is an integer from 1–100; n_3 is an integer of 1–100; and n_4 is an integer of 1–100.

22. (currently amended) ~~A use of the color-developing agent resin emulsion of claim 4 as a resin color-developing agent for no-carbon copying paper~~ The color-developing agent of claim 21, further comprising an emulsifying agent, wherein the color-developing agent resin composition is emulsified with the emulsifying agent in an emulsifying machine to obtain an oil-in-water emulsion with an average particle size of less than about 1.5 μm .

23. (new) The color-developing agent resin composition of claim 1, wherein n_2 is an integer from 1–10.

24. (new) The color-developing agent resin composition of claim 1, wherein n_3 is an integer from 1–10 and n_4 is an integer from 1–10.